Figure 1 Interleukin-21

1	GGC	ACG2	AGI	GA(CAC	GGA.	IGA	GGA	CCG	CTA	ICC	ACA	JAA	JC1	360	CLL	الخال	CGA	GIG	CT.	οU
1	A	R	v	D.	T	D	E	D	R	Y.	P	Q	K	L	A	F	A	E	C	L.	20
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				•						•							٠			•	
61	GTG	CAG	AGG	CIG	TAT	CGA:	TGC	ACG	GAC	GGG	CCG	CGA	GAC	AGC	TGO	CT	CAA	CIC	CGI	GCG	120
21	C.	R	G.	C	I	D	A	R	T	G	R	E	T	A	A	L	N	s	v	R	40
		mai	n T	7																	
	DU			-																	
														•			•			•	
121																					180
41	L	L	0	s	L	L	v	Ţ.	R	R.	R	_P	C	s	R.	D	G	S	G	L	60
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181	CCC	CAC	ACC	TGG	GGC	CIT	TGC	CTI	CCA	CAC	CGA	GIT	CAT	CCA	CGI	ccc	CGI	CGG	CIG	CAC	240
61	P	T	P	G	A	F	A	F	H	T	E	F	I	H	v	P	v	G	C	T	80
																D	cma.	in :	IV		
				•			•							•			·:-				
241								GIC	ACC	GCC	AAC	GCC	GIC	GGG	CCC	112	IGAC	TGC	ACA	CGT	300
81	_C	v	L	P	R	s	v														87
r	oma i	n 1	77																		
_	OHER																				
				·									~~~	·	vm a n	*****		~~		·	360
301	GTC	CTC	.000	AG	KGGC	CAC	CCC	CI	£1.1.1	ALL	31(3)	ATI	TAL	.16.1	TACI	.1.13	TM	الحدر	.100		200
361	AAC	ACI	ACC	CT	rggo	GTC	TG	GC2	ATTO	ccc	GIV	TC	rggz	LGG?	CAC	CCC	ccc	AC.	CTI	CIC	420
421				·			:				•	-		•	77.00	·		77.00	~~	ממודי	480
421	CTC	YIA	TC	AGC	CIC	AG	LAG.	PIG	بالحال	3.T.M	JAA.	بالمداد	3010	MO	-40	-10.	1100	~~		LAA	400
																				•	
481	AGO	TG	AG	AA	AGG:	rgr	CAC	ACG	GCT	3CC	IGT	ACC:	TTG	ZYTY.	CCC	rgiv	CCTY	3CIV	cca	SCT	540
541				•		.~~			300	~~	· ~~	יאמי	- CALLA	·~	·~	TVC	ממח	and a	-	rgga	600
541	100	Cr.	LAC	CI	ATC	MCI	عى	CIC	MUU				301	300			-uu				
											•			•						:	
601	AG.	PAC	ccc	IGT	rrc	TTA.	AAC	AAT	TAT	TTA	AGI	GTA	CGIV	JTA.	TTA:	ΓTΑ	AAC	TGA	TGA	ACAC	660
				_																	
661	AA		222	222		444	AAA	AAA	AAA	AAA	AAA	AAA	AAA.	AAA	AAA	A	705				

Figure 2A Interleukin-22

1	GGAA	TTC	GGC	ACG	AGC	rcg	TGC	CGT	CIC	CAG	rgc	CTT									60
1	N	s	A	R	A	R	A	V	L	s	A	F	H	H	T	L	Q	L	G	P	20
	cccc					#												~~			120
61											35.	-	~	R	-	2	CGP.	200	70	- E	40
21	R	Ε	Q	Α.	R	N	. A	s	C	P	A	G	٠.	ĸ	r	A	٠.				40
121	TCC	GCC	GCC	CAC	CAA	CCT	GCG														180
41	R	P	P	Ţ	N	L	R	s	٧	s	P	W	A	Y	R	I	S_D	_Y_			60
181	CGG	CGAC	GT7	LCCC	CAG	GTA	CCI	GCC	TGA	AGC	CTA	CTC	CCI	GIG	ccc	GGG	CIG	CCI	GAC	CG	240
61		R Oma			R	Y	L	P	Ε	A	Y	<u>c</u>	D	C oma:	in :	G II	_ <u>C</u>	L	T	G	80
															·~				vva		300
241				CGP E		LGG#	CGI	GCC	CTI F	CCG	CAG	CGC		TIGI TI	v	M.	P	The state of	TV	T.	100
81	L	F	G	Е	ĸ	ע	٧	А			3	^	-	·	•		•			n I	
301	TCC	TCC	GCC	GCAC		ccc	·	GCGC	cccc	CGC	ca	TT	CCG	rcti	ACA	ocg:	AGG(CTI	ACG:	rca.	360
101		R	R	III	P	A	С	A	G	G	R	s	V	Y	T	E	A				120
361	. ccr		~~		com	~~~	٠	ചവ	TYCY		AGC	TGG.	AĠA.	AGG	ACG	CAG	ACA	GCA!	# CA	ACT	420
121		L E	V V	G	C	T	C	v	P	E	P	E	K	ם	A		S	I	N	s	140
			D	oma.i	in 1	v														•	
423	L CCI	AGC2	ATCG	ACA	AAC	AGG	GCG	CCA	AGC	TCC	rgc	TGG	GCC	CCA	ACG	ACC	CGC	CCG	CIG	GCC	480
14:									L												160
48:	ı cc	TGAC	GCC	GGI	CCI	GCC	ccc	GGA	GGT	CIC	ccc	GGC	ccc	CAI	·	GAG	GCG	ccc	AAG	CTG	540
54:	1 GA	GCC	GCC!	rgg#	ACCC	CTC	GGI	CGG	CGA	cci	CIG	AAG	AGF	GTC	CAC	CG	LGC?	AAC	CAP	GTG	600
60	1 00	GGA	GCA	CAC	ccc	CGC	CIT	TOC	ATG	GAG	ACI	CGT	PAAC	CAC	CT.	CAS	CIC	ACA	CGC	GCA	660
66	1 TC	CCT	GGC	rtgo	CTT.	TAC	CTZ	ACAF	AGC#	AGC	AGC	GI	GC.	rGGZ	AAG	CIG	ATG	GA I	ACC	ACC	720
72	1 CG	GCA	ccc	GCA:	rcc:	rgr	FTG	GGG	ccc	CAT	GGZ	AGG	FT	rggi	AAA	AGT	TCA	GG2	AGG	crcc	780
78	1 CI	GAG	GAG	CCIV	CTC	AGA:	rcg	CI	CIC	GCGC	GI	CA	GGG	CGIV	GAC	TCA	ccG	CTG	GT.	GCITI	840
				٠			•				· 			<u>.</u>		ama	מידיה	משמ	ACT	מחב	900

Figure 2B Interleukin-22

901	CGACTATATACCTACTTTTAAAATCAACTGTTTTGAATAGACGCAGAGCTATTTTATATT	960
961	ATCARANGAGCTACTCTGTTACATTTCTTAACATATAAACATCGTTTTTTACTTCTTC	1020
1021	TGGTAGAATTTTTTAAAGCATAATTGGAATCCTTGGATAAATTTTGTAGCTGGTACACTC	1080
L081	${\tt TGGCCTGGGTCTCTGAAITCAGCCTGTCACCGMTGGCTGACTGATGAAAATGGACACGTCT}$	1140
1141	${\tt CATCTGACCCACTCTTCCACTGAAGGTCTTCACGGGCCTTCAGGTGGACCAAAAGGG}$	1200
1201	${\tt ATGCACAGGCGCCTGCCCAGGGCCAGGCTAAGAGTTCCAAAGATCTCAGATTTGG}$	1260
1261	${\tt TTTTAGTCATGAATACATAAACAGTCTCAAACTCGCACAATTTTTTCCCCCTTTTGAAAG$	1320
1321	${\tt CCACTGGGGCCAATTTGTGGTTAAGAGGTGGTGAGATAAGAAGTGGAACGTGACATCTTT}$	1380
1381	${\tt GCCAGTTGTCAGAAGAATCCAAGCAGGTATTGGCTTAGTTGTAAAGGGCTTTAGGATCAGG}$	1440
1441	$\tt CTGAATATGAGGACAAAGTGGGCCACGTTAGCATCTGCAGAGATCAATCTGGAGGCTTCT$	1500
1,501	GTTTCTGCXTTCTGCCACGAGAGCTAGGTCCTTGATCTTTTCTTT	1560
1561	CTCTGAACACAATTATTTGTAAAAGTTAGTAGTTCTTTTTTAAATCATTAAAAGAGGCTT	1620
1621	сстсалалалалалалала 1642	

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Н	MTPGKTSL	VSLLLLLLSL	EATVKA	GITIPRNPG	CPNSED	
Н	WSPGRASSV	7 SLMLLLLLLSL	A A T V K A	AAIIPOS	_	- mIL-17.aa
\leftarrow	MTFRMTSLV	7-L-LLLLLSI	DCIVKS	EIT	CLAANN	- vIL-17.aa
\leftarrow	DWPHNL	FLUTISIFEG	GOPRSPKSKR	KGQGRPG	АР СРИОУРЬВЬ У	V II20.aa
Н	A	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	- IL-21.aa
-1	WILLPGLIF	FLTWINTC	LAHHDPSLRG	нризисти	CYSABELPLGQ	A ILZIFL.aa
н	1 1 1 1 1 1	S N	A R	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1	- IL-22.aa
۲.	1 1 1 1 1 1 1	5 9	ADRPEELLE -	1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- IL22ext.aa
•		- 8	- 6	- 6	- 8	- 8
		3-	2-	8-	8-	0-
8	1 1 1 1 1 1 1	KNFPRT	VMVNINI - HN	RNTNTRE	X Q S S	- IL-17.aa
Ħ	1 1 1 1 1 1 1	KDTLQN	VKVNLKVFNS	LGAKVSSRR	P S D Y	- mIL-17.aa
8	1 1 1 1 1 1 1 1	THE STATES	VMVTLSI-RN	WNTSSKR	A S D Y	- vIL-17.aa
더	SRMKPYARM	IEEYERNIE-E	MVAQLRNSSE	T. A Q	K C E V	N ILZO.aa
N	1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- IL-21.aa
8	PP-HLLARG	AKWGQALPVA	LVSSLEAASH	RCRHBRPSA	TOCPVL-RPE	E ILZIFL.aa
	1 1 1 1 1 1 1 1	A R A	VLSAFEHTIQ	LGPREQAR	AS - CPAGGRPA	D IL-22.aa
2	OLYGR-	LAAG	Ţ	LGPREOARN	AS-CPAGGRPA	О

Figure 3A

150 © N V D Y IL-17.aa © K L D H mIL-17.aa © N V D Y VI-17.aa M O E D R IL20.aa G R E T A IL-21.aa G R E T A IL-21.aa G R E T A IL-21.aa G E E D V IL-22.aa G E E D V IL-22.aa	200 T C V T P LL-17.aa T C V T P VIL-17.aa T C V Y P VIL-17.aa T C V - 1120.aa T C V - 11-21.aa
140 CRHLGCINAD- CRYCCNNAE- CRYLGCVNAE- CLCLGCVNAP- CLCRGCIDART CLCRGCIDART CLCRGCIDART CLCRGCIDART	190 EK IL V S V G C EK ML V T V G C EK ML V T V G C R A V W E T L A V G C H T EF I H V P V G C H T E A V T I P V G C
ERYPSVIWEAK DRYPSVIWEAQ DRYPSVIWEAQ SRIPVDIPEAK DRYPQKIAFAE DRYPQKIAFAE ARYPRYIPEAY	180
120 PWNLHRNEDPI PWTLHRNEDPI PWGYSINHDP PWGYSINHDP PWRYRVDTDE PWRYRISYDP	170 LRREP
110 110 110 110 110 110 110 110 110 110	160 MMSVPIQQEILV MNSVLIQQEILV MVSVPIQQEILV LNSVR-SQVP LNSVRLLQSLLV LNSVRLLQSLLV LNSVRLLQSLLV FRSAPVYMPTVV
2888339 28887 2887 2887 2888	109 H 112 H 105 H 105 H 137 S 135 A 145 A 88 R 101 R

	IL-17.aa	mL-17.aa	vIL-17.aa	П20.аа	IL-21.aa	п21гг.аа	IL-22.aa	+
220 230				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			NSSIDKOGAKLLLGPNDAPAGP	
210	ннуя	ROAA	TVHNVD	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PEKDADSINSSIDKO	-

Figure 30

Figure 4
Interleukin-21 Polypeptide Analysis

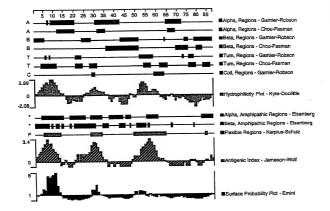


Figure 5 Interleukin-22 Polypeptide Analysis

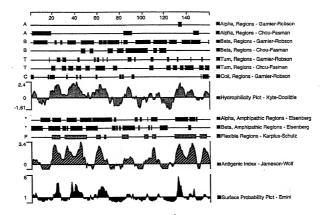


Figure 6A Interleukin-21

1,	GC:	CC	AAG	CCC	AGC	TG	cca	CGC.	I'GC	CGC	CAC	CAT	GAC	CI	CCI	cca	CGG	CCIK	CIK	FTT	60
1												M	T	L	L	P	G	L	L	F	9
												===									
				•			•				•			٠			•			•	
61	CI	AC	CIG	3CIV	GCA	CAC	DTA	CCIV												CCAC	120
10	L	T	W	L	H	T	С	L	A	H	H	D	P	s	L	R	G	H	P	H	29
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				٠			٠				•			•			٠			•	
121	AG.	PCA.	CGG	TAO	ccc	ACA	CTG	CTA	CTC	GGC	TGA	GGA	ACT	GCC	CCI	CGG	CCA	GGC	CCC	CCCA	180
30	s	н	G	T	P	H.	С	Y	S	A	E	E	L	P	L	G	Q	A	P	P	49
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181																					240
50	H	L	L	A	R	G	A	K	W	G	Q	A	L	P	V	Α	L	V.	S	S	69
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				٠			-							٠			•				
241	CI	3GA	.GGC	AGC	AAG	CCA	CAG	GGG	GAG	GCA	CGA	GAG	GCC	CIC	AGC	TAC	GAC	CCA	STG	CCCG	300
70	L	E	А	A	s	н	R	G	R	H	E	R	P	s	A	T	T	Q	С	P	89
				·						-		~~		~~	~~	~	, -	~	200	~~~	360
																				CTGG	
90	v	L	R	P	E	E	V	L	Е	A	D	T	H	Q	R					W	109
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361	AG	ATA	CCC	GG1	GGA	CAC	GGA	ATG#	William The state of the state	wu	CIM			Market .	4U-1	.000			COM	GIGC.	129
110	R	Y	R	V.	D_					R	_ <u>Y</u>	P	Q	ĸ	7	A	r			<u>c</u>	
						D	oma	in	I										Dom.	ain Il	
421	~	rm	-	·2000	-	חמחי	~;	אחרבר	יארר	2020	~		con	CAC	יאכר	-JK-Z	C.	maa.	CTC	CGIG	480
130	-	GI		2020	~10	TITL		1100		JOPA M	-	2000	- E		~~	2		NT.	-	77	149
130						1	ט	А	ĸ	T	G	м	-	-	^	-	_	14	3	٠	143
	2	λ om	ain	II																	
481	CC.	c	, C	rcc1	CAC	-	M-C-1	KK	rgc	rgc	ccc	3CC	GCX	CTY	GCT		GCG/	ACGC	CIC	CGGG	540
150																				G	169
150	ж	-	14	Q	3	-	-							•	-		_	_	_	-	
								1	Come	2111	III										
541	C	co	CA	CAC	TGO	GGG	CT	rig	CCT	TCC	ACAG	CCG	AGT	TCA'	TCC	ACG	rcc	COG	CGC	CTGC	600
170						A		A			T									c	189
170		-	-	-	•	-	~		-		-	_	-	_		-		mai			
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601	A	CT	GCG	IGC	TGC	cca	GTT	CAG	TGT	GAC	CGC	CAA	GGC	CGT	GGG	GCC	CIT	AGA	CTG	GACAC	660
190							s														197
	Dom				-		3	٠													
	LOM	all	10																		
661	G	GT	GCT	cca	CAG	AGG	GCA	ccc	CCT	ATT	TAT	GTG	TAT	TTA	TTG	TTA	III.	ATA:	rga	CTCCC	720
																				_	

Figure 6B Interleukin-21

781	${\tt TCCTCATCTCCAGCCTCAGTAGTTGGGGGTWGAAGGAGCTCAGCACCTCTTCCAGCCCTT}$	840
841	AAAGCTGCAGAAAAGGTGTCACACGGCTGCCTGTACCTTGGYTCCCTGTCCTGCTCCCGG	900
901	CTTCCCTTACCCTATCACTGGCCTCAGGCCCCCGCAGGCTGCCTCTTCCCAACCTCCTTG	960
961	GAAGIACCCCTGTTTCTTAAACAATTATTTAAGTGTACGTGTATTATTAAACTGATGAAC	1020
021	асалаладаалалалалалалалалалалалалалалала	

Figure 7 Interleukin-21 Polypeptide Analysis

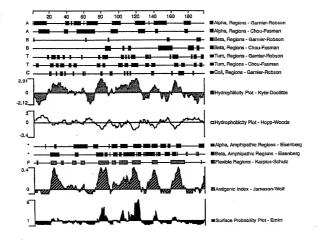


Figure 8 Interleukin-22

				•							•			•			•				
1	GG	CTG	CGC	GGA	CCG	GCO	GGA	GGA	GCT	ACT	GGA	GCA	GCT	GTA	CGG	GCG	CCT	GGC	GGC	CGGC	60
1	G	С	А	D	R	P	E	E	L	L	E	0	L	Y	G	R	L	A	A	G	20
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121																					
41	s	С	P	A	G	G	R	₽	A	Ð	R	R	F	R	P	P	T	N	L	R	60
181	AG	COT	Y TY	1357	CTC:	ccc	מידינ	CAG	TAA	CTC	CTA	CGA	ccc	GGC	GAC	GEA	ccc	CAC	GTA	CCIG	240
61																					80
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241	~~	mais.			~~~		·				÷	~~	•		vim	~~	m,			CCTG	300
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																				CIGC	
101	R	F	R	s	A	P	٧	Y	М	P	T	V.	v	L	R	R	T	P	A	С	120
														C.	D-I	IΙ					
361	GC	CGC	CGC	CCC	TTC	CCC	CI	CAC	CG	AGGC	CTA	ACG1	CAC	CA	rece	CG	GGC	CIC	CAC	CTGC	420
121	A	G	G	R	S	v	Y	T	E	А	Y	v	т	1	P	v	G	c	T	С	140
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421	~							•	72.07			₩ 100737	, come	·	2020	w-c:	101		cc	ececc	480
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481														CIV	ЗA		_				
161	K	L	L	L	G	P	N	D	A	₽	A	G	P			17	4				

Figure 9 Interleukin-22 Polypeptide Analysis

